

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Athanasios Athanasiou  
Application Number: 10/582,922  
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Group Art Unit: 2863  
Examiner: Michael P. Nghiem  
Title: HOUSEHOLD APPLIANCE AND METHOD FOR  
DETERMINING A CAUSE OF FAILURE ON THIS  
APPLIANCE

Mail Stop Appeal Brief - Patents  
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**APPEAL BRIEF**

Pursuant to 37 CFR 1.192, Appellants hereby file an appeal brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 10-21 are pending in the present application. Claims 1-9 were canceled. The final rejections of claims 10-21 are being appealed. Claims 10, 16, 20, and 21 are independent.

(4) STATUS OF AMENDMENTS

The Amendment under 37 C.F.R. § 1.116, which was filed on July 6, 2009, was entered by the Advisory Action dated July 21, 2009.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

An exemplary embodiment of the present invention, as recited by, for example, independent claim 10, is directed to a household appliance (see, e.g., Figure) comprising at least one sensor (5, 6, 8) for detecting at least one operating parameter of the household appliance (see, e.g., page 4, lines 29-32, paragraph [017]),

a memory (9) connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor (5, 6, 8) (see, e.g., page 5, lines 9-11, paragraph [018]) and

an interface (10) for reading out the content of the memory (9) (see, e.g., page 6, lines 9-12 and 21-23, paragraphs [023] and [024]).

In this manner, the present invention provides an apparatus for recording data associated with appliance operation and moving that data to a remote device which can be used by service personnel to diagnose failures within the appliance. See, e.g., page 2, lines 14-18, paragraph [006], and lines 20-28, paragraph [007].

Another exemplary embodiment of the present invention, as recited by, for example, independent claim 16, is directed to a method for determining a cause of failure on a household appliance (see, e.g., page 2, lines 14-18, paragraph [006], and lines 20-28, paragraph [007]), the method comprising the following acts:

periodically detecting at least one operating parameter of the household appliance (see, e.g., page 4, lines 29-32, paragraph [017]) and recording the detected value in a memory (9) at least during normal operation of the household appliance (see, e.g., page 5, lines 9-11, paragraph [018]);

reading out the memory (9) in the case of a fault (see, e.g., page 6, lines 9-12 and 21-23, paragraphs [023] and [024]);

tracing the cause of the fault from the parameter values which have been read out (see, e.g., page 2, lines 8-12 and 20-28, paragraphs [005] and [007]; page 3, lines 1-13, paragraph [008]; page 6, lines 21-26, paragraph [024]).

Another exemplary embodiment of the present invention, as recited by, for example, independent claim 20 is directed to a household appliance comprising

at least one sensor (5, 6, 8) for detecting at least one operating parameter of the household appliance (see, e.g., page 4, lines 29-32, paragraph [017]),

a memory (9) connected permanently to the sensor (5, 6, 8) for periodically recording the value of the operating parameter detected by the sensor (5, 6, 8) (see, e.g., page 5, lines 9-11, paragraph [018]),

an interface (10) for reading out the content of the memory (9) (see, e.g., page 6, lines 9-12 and 21-23, paragraphs [023] and [024]), and

a remote service device (16) in selective operative communication with the interface (10) (see, e.g., page 2, lines 30-32, and page 3, line 1, paragraph [008]; page 3, lines 19-23, paragraph [010]; page 6, lines 21-26, paragraph [024]) for use by a service designate for diagnosing problems with the appliance (see, e.g., page 2, lines 8-12 and 20-28, paragraphs [005] and [007]; page 3, lines 1-13, paragraph [008]; page 6, lines 21-26, paragraph [024]).

Another exemplary embodiment of the present invention, as recited by, for example, independent claim 21, is directed to a method for determining a cause of failure on a household appliance (see, e.g., page 2, lines 8-12 and 20-28, paragraphs [005] and [007]; page 3, lines 1-13, paragraph [008]), the method comprising the following acts:

periodically detecting at least one operating parameter of the household appliance (see, e.g., page 4, lines 29-32, paragraph [017]) and recording at least one detected value in a memory (9) within the appliance at least during normal operation of the household appliance (see, e.g., page 5, lines 9-11, paragraph [018]);

reading out the memory (9) in the case of a fault using an interface (10) within the appliance (see, e.g., page 6, lines 9-12 and 21-23, paragraphs [023] and [024]);

communicating with a remote service device (16) in selective operative communication with the interface (10) for use by a service designate for diagnosing problems with the appliance (see, e.g., page 2, lines 30-32, and page 3, line 1, paragraph [008]; page 3, lines 19-23, paragraph [010]; page 6, lines 21-26, paragraph [024]); and

determining the cause of the failure using parameter values which have been obtained from the appliance using the remote service device (16) (see, e.g., page 2, lines 8-12 and 20-

28, paragraphs [005] and [007]; page 3, lines 1-13, paragraph [008]; page 6, lines 21-26, paragraph [024]).

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- a. Whether claims 10 and 14-16 are anticipated under 35 U.S.C. 102(b) by the Ishio et al. reference (US 6,553,774).
- b. Whether claims 11-13 are unpatentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Severn reference (GB 2 152 673).
- c. Whether claims 17 and 18 are unpatentable under 35 U.S.C. 103(a) over the Ishio et al. reference.
- d. Whether claim 19 is unpatentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Finnegan et al. reference (US 4,482,785).
- e. Whether claims 20 and 21 are unpatentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Yoshida et al. reference (US 6,438,973).

(7) ARGUMENT

- a. Claims 10 and 14-16 are patentable under 35 U.S.C. 102(b) as being anticipated by the Ishio et al. reference (US 6,553,774).

Claims 10 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by the Ishio et al. reference. Appellants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [...] The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131.

Appellants respectfully submit that the Ishio et al. reference does not disclose the features of the claimed invention including a memory connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor and an interface for reading out the content of the memory, as recited by independent claim 10.

Independent claim 16 recites somewhat similar features.

As explained above, these features are important for providing an apparatus for recording data associated with appliance operation and moving that data to a remote device which can be used by service personnel to diagnose failures within the appliance.

The Ishio et al. reference very clearly does not disclose these features. Indeed, the Ishio et al. reference very clearly fails to disclose at least a memory connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor and an interface for reading out the content of the memory, as recited in claim 10.

Instead, the Ishio et al. reference is directed to a self-diagnosing apparatus for a refrigerator, operable to a diagnosis level and beyond without input from service personnel. In the Ishio et al. reference, a detector is provided to detect a plurality of condition indicative quantities with respect to the refrigerator and a diagnosis arrangement which compares the condition indicative quantities or diagnosis calculation values which are calculated based on the condition indicative values with a predetermined threshold value and judges whether an operation of the refrigerator is normal or abnormal and ultimately selects a predetermined improvement action which is set in advance for diagnosed abnormal condition. See col. 1, lines 63-67; Col. 2, lines 1-7.

The present invention, as claimed, does not provide a self-diagnosing apparatus for a refrigerator, but rather provides a data recordation system which can provide data to a remote device for evaluation by service personnel to determine the failure cause within the appliance, either on-site or from a central service center. The present invention provides an interface for reading out the content of the memory, thereby providing the data to a remote device for evaluation by service personnel to determine the failure cause within the appliance, either on-site or from a central service center.

In stark contrast, the Ishio et al. reference does not provide an interface for reading out the content of the memory. Instead, the memory and diagnostic device of the Ishio et al. reference are entirely internal to the refrigerator and do not provide an interface for reading out the content of the memory. Indeed, since the Ishio et al. reference self-diagnoses and then selects a predetermined improvement action, the Ishio et al. reference has absolutely no need to read out the content of the memory.

The Advisory Action dated July 21, 2009, alleges that the Ishio et al. reference discloses that the condition-indicative quantities with respect to the refrigerator is stored in a memory (Abstract, lines 4-7), and the diagnostic device compares the condition-indicative quantities (stored in memory) with a predetermined threshold value (Abstract, lines 8-12). Thus, Advisory Action alleges that, inherently, the comparing step would require the condition-indicative quantities to be read out from memory before comparing them with the predetermined threshold value.

However, contrary to the assertions in the Advisory Action, the Ishio et al. reference does not provide an interface for reading out the content of the memory. Instead, as explained above, the memory and diagnostic device of the Ishio et al. reference are entirely internal to the refrigerator. The Ishio et al. reference does not provide an interface for reading out the content of the memory from the household appliance. Indeed, since the Ishio et al. reference performs the self-diagnoses and then selection of a predetermined improvement action

entirely internal to the refrigerator, the Ishio et al. reference has absolutely no need to read out the content of the memory.

In stark contrast, the present invention, as claimed, does not provide a self-diagnosing apparatus for a refrigerator, but rather provides a data recordation system which can provide data to a remote device for evaluation by service personnel to determine the failure cause within the appliance, either on-site or from a central service center. The present invention provides an interface for reading out the content of the memory, thereby providing the data to a remote device for evaluation by service personnel to determine the failure cause within the appliance, either on-site or from a central service center.

The Ishio et al. reference very clearly does not disclose a memory connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor and an interface for reading out the content of the memory, as recited by independent claim 10.

Independent claim 16 recites somewhat similar features. The Ishio et al. reference very clearly does not disclose a method for determining a cause of failure on a household appliance, the method comprising periodically detecting at least one operating parameter of the household appliance and recording the detected value in a memory at least during normal operation of the household appliance; reading out the memory in the case of a fault; tracing the cause of the fault from the parameter values which have been read out, as recited in claim 16, for somewhat similar reasons as those set forth above.

Appellants respectfully request withdrawal of this rejection.

- b. Claims 11-13 are patentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Severn reference (GB 2 152 673).

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Ishio et al. reference in view of the Severn reference.

Appellants respectfully traverse this rejection.

The Severn reference does not remedy the deficiencies of the Ishio et al. reference.

The Severn reference teaches a telephone interface or cordless interface. Appellants respectfully submit that one of ordinary skill in the art would not have had any apparent reason to combine the Severn reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Severn reference.

As explained above, the Ishio et al. reference is directed to a self-diagnosing apparatus for a refrigerator, operable to a diagnosis level and beyond without input from service personnel. In the Ishio et al. reference, a diagnosis arrangement selects a predetermined improvement action which is set in advance for diagnosed abnormal conditions. Since the Ishio et al. reference self-diagnoses and then selects a predetermined improvement action, the Ishio et al. reference has no need for the interface of the Severn reference to read out the content of the memory.

Thus, one of ordinary skill in the art would not have had any apparent reason to combine the Severn reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Severn reference.

Appellants respectfully request reversal of this rejection.

- c. Claims 17 and 18 are patentable under 35 U.S.C. 103(a) over the Ishio et al. reference.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Ishio et al. reference.

Appellants respectfully traverse this rejection.

Claims 17 and 18 are patentable over the Ishio et al. reference at least by virtue of their dependency from claim 16.

Appellants respectfully request withdrawal of these rejections.

d. Claim 19 is patentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Finnegan et al. reference (US 4,482,785).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Ishio et al. reference in view of the Finnegan et al. reference.

Appellants respectfully traverse this rejection.

The Finnegan et al. reference does not remedy the deficiencies of the Ishio et al. reference. The Finnegan et al. reference is directed to a system where installations that involve large freezer compartment groups including large numbers of thermal sensors include means for determining the identity of an individual thermal sensor among many causing the alarm. As seen in Figure 1d, an optional remote control and monitor unit 12 serve to identify one of several sensors in a group that causes an alarm by sensor identity number assigned to each sensor. (Col. 7, lines 48-56).

Appellants respectfully submit that one of ordinary skill in the art would not have had any apparent reason to combine the Finnegan et al. reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Finnegan et al. reference.

As explained above, the Ishio et al. reference is directed to a self-diagnosing apparatus for a refrigerator, operable to a diagnosis level and beyond without input from service personnel. In the Ishio et al. reference, a diagnosis arrangement selects a predetermined improvement action which is set in advance for diagnosed abnormal conditions. Since the Ishio et al. reference self-diagnoses and then selects a predetermined improvement action, the Ishio et al. reference has no need for transferring the recorded parameter values from the household appliance, as allegedly taught by the Finnegan et al. reference.

Thus, one of ordinary skill in the art would not have had any apparent reason to combine the Finnegan et al. reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Finnegan et al. reference.

Appellants respectfully request withdrawal of these rejections.

- e. Claims 20 and 21 are patentable under 35 U.S.C. 103(a) over the Ishio et al. reference in view of the Yoshida et al. reference (US 6,438,973).

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Ishio et al. reference in view of the Yoshida et al. reference.

Appellants respectfully traverse this rejection.

The Yoshida et al. reference does not remedy the deficiencies of the Ishio et al. reference.

Appellants respectfully submit that one of ordinary skill in the art would not have had any apparent reason to combine the Yoshida et al. reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Yoshida et al. reference.

As explained above, the Ishio et al. reference is directed to a self-diagnosing apparatus for a refrigerator, operable to a diagnosis level and beyond without input from service personnel. In the Ishio et al. reference, a diagnosis arrangement selects a predetermined improvement action which is set in advance for diagnosed abnormal conditions. Since the Ishio et al. reference self-diagnoses and then selects a predetermined improvement action, the Ishio et al. reference has no need for an interface to read out the content of the memory, as allegedly taught by the Yoshida et al. reference.

Thus, one of ordinary skill in the art would not have had any apparent reason to combine the Yoshida et al. reference and the Ishio et al. reference. Further, there is no teaching or motivation to combine the Ishio et al. reference with the Yoshida et al. reference.

For at least the foregoing reasons, none of the applied references discloses or suggests the subject matter defined by independent claims 10, 16, 20, and 21. Moreover, it would not have been obvious to combine the applied references to arrive at the features of independent claims 10, 16, 20, and 21.

Appellants respectfully request withdrawal of these rejections.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejections.

Respectfully submitted,

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## CLAIMS APPENDIX

- 1-9. (Canceled)
10. (Rejected) A household appliance comprising at least one sensor for detecting at least one operating parameter of the household appliance, a memory connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor and an interface for reading out the content of the memory.
11. (Rejected) The household appliance according to claim 10, wherein the first interface includes an interface to a data network, especially to a telephone network.
12. (Rejected) The household appliance according to claim 10, wherein the data network includes a telephone network.
13. (Rejected) The household appliance according to claim 10, wherein the first interface includes a cordless interface.
14. (Rejected) The household appliance according to claim 10, wherein the household appliance includes a housing and the memory is built in the housing.
15. (Rejected) The household appliance according to claim 10, wherein the household appliance includes at least one of a refrigerating device, a dishwasher, and a washing machine.
16. (Rejected) A method for determining a cause of failure on a household appliance, the method comprising the following acts:

- periodically detecting at least one operating parameter of the household appliance and recording the detected value in a memory at least during normal operation of the household appliance;
- reading out the memory in the case of a fault;
- tracing the cause of the fault from the parameter values which have been read out.
17. (Rejected) The method according to claim 16, further comprising deleting the recorded parameter values after a predetermined storage time and overwrites released memory space.
18. (Rejected) The method according to claim 16, wherein the recorded parameter values are depleted after a first predetermined storage time and deleted after a second predetermined storage time.
19. (Rejected) The method according to claim 16, further comprising transferring the recorded parameter values from the household appliance to a separate device and performing the act of tracing the cause of the fault at the separate device.
20. (Rejected) A household appliance comprising at least one sensor for detecting at least one operating parameter of the household appliance, a memory connected permanently to the sensor for periodically recording the value of the operating parameter detected by the sensor, an interface for reading out the content of the memory, and a remote service device in selective operative communication with the interface for use by a service designate for diagnosing problems with the appliance.
21. (Rejected) A method for determining a cause of failure on a household appliance, the method comprising the following acts:

periodically detecting at least one operating parameter of the household appliance and recording at least one detected value in a memory within the appliance at least during normal operation of the household appliance;

reading out the memory in the case of a fault using an interface within the appliance; communicating with a remote service device in selective operative communication with the interface for use by a service designate for diagnosing problems with the appliance; and

determining the cause of the failure using parameter values which have been obtained from the appliance using the remote service device.

Attorney Docket No.: 2003P01911WOUS

EVIDENCE APPENDIX

None

Attorney Docket No.: 2003P01911WOUS

**RELATED APPEALS APPENDIX**

None